

COMMONWEALTH OF MASSACHUSETTS

Worcester, S.S.

To any of the Constables of the Town of Athol, in the County of Worcester, Greetings:

In the name of the Commonwealth of Massachusetts, you are hereby directed to notify the inhabitants of the Town of Athol, qualified to vote in the election and Town affairs, to meet in the Memorial Building in said Athol on Monday, October 19, 2020 at 7:00 p.m., then and there to act on the following articles:

Article 1: To see if the Town will vote to adopt Part I, Title V, Chapter 33, Section 59: Effect of Military Service on Salary, Seniority and Leave Allowances of Public Employees, *or act in relation thereto.*

Article 2: To see if the Town will vote to accept provisions of Chapter 218 of the Acts of 2016 ('An Act Modernizing Municipal Finance and Government') Sections 26, 27 and 30, allowing the Town to establish Parking Benefits Districts, in which parking revenue collected therein may be designated in whole or in part for use in that district through a dedicated fund in accordance with the purposes and uses listed in Section 22A of Chapter 40; *or act in relation thereto.*

Article 3: To see if the Town will vote to amend the Athol Zoning Bylaws by amending Article II, Section 2.6 by deleting the following language within the 2.6 Intensity of Use Schedule Maximum Building requirements related to Floor Area Ratio:

The language in the Zoning Bylaw currently reads:

	Residence A	Residence B	Residence C	Central Commercial	Neighborhood Commercial	General Commercial	Industrial Commercial
	<u>RA</u>	<u>RB</u>	<u>RC</u>	<u>CA</u>	<u>CB</u>	<u>G</u>	<u>I</u>
<u>2.6 Intensity of Use Schedule</u>							
<u>Maximum Building</u>							
Maximum Lot Coverage (%)	20	15	15	50	30 ^a	40 ^a	35
Height (feet)	35	35	35	50 ^e	35	45	45
 Floor Area Ratio	 0.3	 0.2	 0.2	 1.0	 0.5a	 0.5a	 0.4

Proposed Language, by deleting the Floor Area Ratio requirements:

	Residence A	Residence B	Residence C	Central Commercial	Neighborhood Commercial	General Commercial	Industrial Commercial
<u>2.6 Intensity of Use Schedule</u>	<u>RA</u>	<u>RB</u>	<u>RC</u>	<u>CA</u>	<u>CB</u>	<u>G</u>	<u>I</u>
<u>Maximum Building</u>							
Maximum Lot Coverage (%)	20	15	15	50	30^a	40^a	35
Height (feet)	35	35	35	50^e	35	45	45

Or act in relation thereto.

Article 4: To see if the Town of Athol will vote to amend the Athol Zoning Bylaws Article III, by adding the following, Section 3.30, Battery Energy Storage Systems to the Athol Zoning Bylaw.

Section 3.30 Battery Energy Storage Systems

3.30.1 Statement of Purpose

This Battery Energy Storage System Law is adopted to advance and protect the public health, safety, welfare, and quality of life of The Town of Athol by creating regulations for the installation and use of battery energy storage systems, with the following objectives:

- A. To provide a regulatory scheme for the designation of properties suitable for the location, construction and operation of battery energy storage systems;
- B. To ensure compatible land uses in the vicinity of the areas affected by battery energy storage systems;
- C. To mitigate the impacts of battery energy storage systems on environmental resources and other protected resources; and
- D. To create synergy between battery energy storage system development and the August 2018 Commonwealth of Massachusetts Act to Advance Clean Energy that established the Clean Peak Standard Energy Storage System.

3.30.2 Definitions

Definitions proposed for this Battery Storage Energy Systems Bylaw have been incorporated directly within Article IV, Section 4.1, the Definitions section of the Athol Zoning Bylaw.

3.30.3 Applicability

- A. The requirements of this by-law shall apply to all battery energy storage systems permitted, installed, or modified in the Town of Athol after the effective date of this by-law, excluding general maintenance and repair.
- B. Battery energy storage systems constructed or installed prior to the effective date of this by-law shall not be required to meet the requirements of this by-law.
- C. Modifications to, retrofits or replacements of an existing battery energy storage system that increase the total battery energy storage system designed discharge duration or power rating shall be subject to this by-law.

3.30.4 General Requirements

- A. A building permit and an electrical permit shall be required for installation of all battery energy storage systems.
- B. All battery energy storage systems, all Dedicated Use Buildings, and all other buildings or structures that (1) contain or are otherwise associated with a battery energy storage system and (2) subject to The Town of Athol by-laws.

3.30.5 Prohibition on Tier 1 Battery Energy Storage Systems

Tier 1 Battery Energy Storage Systems are defined as those that have an aggregate energy capacity less than or equal to 600kWh and, if in a room or enclosed area, consist of only a single energy storage system technology. Tier 1 Battery Energy Storage Systems shall be prohibited in the Town of Athol until the adoption of adequate fire safety standards.

3.30.6 Permitting Requirements for Tier 2 Battery Energy Storage Systems

Tier 2 Battery Energy Storage Systems are defined as those that have an aggregate energy capacity greater than 600kWh or are comprised of more than one storage battery technology in a room or enclosed area. Tier 2 Battery Energy Storage Systems are permitted through the issuance of a Special Permit within the Battery Energy Storage System Overlay Zoning District, and shall be subject to the site plan application requirements set forth in this Section as well as Section 3.17.3, MCOD Site Plan Review and Section 3.18, Site Plan Review, as applicable.

- A. Site plan application. For a Tier 2 Battery Energy Storage System requiring a Special Permit, site plan approval shall be required as indicated in the preceding paragraph. Any site plan application shall include the following information:
 - 1) Property lines and physical features, including roads, for the project site.
 - 2) Proposed changes to the landscape of the site, grading, vegetation clearing and planting,
 - 3) Exterior lighting, and screening vegetation or structures.
 - 4) A one- or three-line electrical diagram detailing the battery energy storage system layout, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and over current devices.

- 5) A preliminary equipment specification sheet that documents the proposed battery energy storage system components, inverters and associated electrical equipment that are to be installed. A final equipment specification sheet shall be submitted prior to the issuance of building permit.
- 6) Name, address, and contact information of proposed or potential system installer and the owner and/or operator of the battery energy storage system. Such information of the final system installer shall be submitted prior to the issuance of building permit.
- 7) Name, address, phone number, and signature of the project Applicant, as well as all the property owners, demonstrating their consent to the application and the use of the property for the battery energy storage system.
- 8) Fire Safety Compliance Plan. Such plan shall document and verify that the system and its associated controls and safety systems are in compliance with the Town of Athol by-laws and the requirements of 527 CMR 1.00.
- 9) Operation and Maintenance Manual. Such plan shall describe continuing battery energy storage system maintenance and property upkeep, as well as design, construction, installation, testing and commissioning information.
- 10) Erosion and sediment control and storm water management plans prepared to Massachusetts Department of Environmental Protection standards, if applicable, and to such standards as may be established by the Planning Board.
- 11) A Noise Analysis that includes documentation by an acoustical engineer of the noise levels projected to be generated by both the installation and operations of the facilities as required in Section 7(E).
- 12) Prior to the issuance of the building permit or final approval by the Planning Board, but not required as part of the application, engineering documents must be signed and sealed by a Massachusetts Licensed Professional Engineer.

3.30.7 Design Standards

- A. Utility Lines and Electrical Circuitry. All on-site utility lines shall be placed underground to the extent feasible and as permitted by the serving utility, with the exception of the main service connection at the utility company right-of-way and any new interconnection equipment, including without limitation any poles, with new easements and right-of-way.
- B. Signage.
 - 1) The signage shall be in compliance with ANSI Z535, and Section 3.9 of the Athol Zoning Bylaw, and shall include the type of technology associated with the battery energy storage systems, any special hazards associated, the type of suppression system installed in the area of battery energy storage systems, and 24-hour emergency contact information, including reach-back phone number.

- 2) As required by the NEC, disconnect and other emergency shutoff information shall be clearly displayed on a light reflective surface. A clearly visible warning sign concerning voltage shall be placed at the base of all pad-mounted transformers and substations.
- C. Lighting. Lighting of the battery energy storage systems shall be limited to that minimally required for safety and operational purposes and shall be reasonably shielded and downcast from abutting properties. All lighting shall comply with International Dark Sky Standards FSA Certification Requirements.
 - D. Vegetation and tree-cutting. Areas within 20 feet on each side of Tier 2 Battery Energy Storage Systems shall be cleared of combustible vegetation and other combustible growth, unless a greater distance is required by the Fire Department. Single specimens of trees, shrubbery, or cultivated ground cover such as green grass, ivy, succulents, or similar plants used as ground covers shall be permitted to be exempt provided that they do not form a means of readily transmitting fire. Removal of trees should be minimized to the extent possible.
 - E. Noise. Noise generated by battery storage energy systems and associated equipment such as air conditioners, cooling fans, inverters, and other machinery shall conform at a minimum to applicable state and local noise regulations, including the DEP's Division of Air Quality noise regulations, 310 CMR 7.10 and 3.8.1.1 of the Athol Zoning Bylaw.

Noise reduction shall be considered and incorporated as needed during the design phase of the installation including the location of the noise generator, shielding, noise cancellation, filtering, and noise suppression.

Applicants may submit equipment and component manufacturers' noise ratings to demonstrate compliance. The applicant may be required to provide Operating Sound Pressure Level measurements from a reasonable number of sampled locations at the perimeter of the battery energy storage system to demonstrate compliance with this standard.

- F. Decommissioning.
 - 1) Decommissioning Plan. The applicant shall submit a decommissioning plan to be implemented upon abandonment and/or in conjunction with removal from the facility. The decommissioning plan shall include:
 - a. A narrative description of the activities to be accomplished, including who will perform that activity and at what point in time, for complete physical removal of all battery energy storage system components, structures, equipment, security barriers, and transmission lines from the site;
 - b. Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations;
 - c. The anticipated life of the battery energy storage system;
 - d. The estimated decommissioning costs and how said estimate was determined;
 - e. The method of ensuring that funds will be available for decommissioning and restoration;

- f. The method by which the decommissioning cost will be kept current;
 - g. The manner in which the site will be restored, including a description of how any changes to the surrounding areas and other systems adjacent to the battery energy storage system, such as, but not limited to, structural elements, building penetrations, means of egress, and required fire detection suppression systems, will be protected during decommissioning and confirmed as being acceptable after the system is removed; and
 - h. A listing of any contingencies for removing an intact operational energy storage system from service, and for removing an energy storage system from service that has been damaged by a fire or other event.
- 2) Decommissioning Fund. The owner and/or operator of the energy storage system, shall continuously maintain a fund or bond payable to The Town of Athol, in a form approved by The Town of Athol for the removal of the battery energy storage system, in an amount to be determined by The Town of Athol, for the period of the life of the facility. All costs of the financial security shall be borne by the applicant.
- 3) An inspection of the completed decommissioned area shall be reviewed by the Board of Planning Communities Development's Peer Reviewing Engineer before the Board approves the decommissioning work in accordance with the Decommissioning Plan. The owner and/or operator shall pay for the cost of this review with such payment being provided by the owner and/or operator prior to the Peer Reviewing Engineer undertaking said review.
- 4 Emergency Operations Plan. The applicant shall provide a copy of the Battery Storage Energy Systems' Emergency Operations Plan (EOP) to the Athol Fire and Police Departments upon filing of the Special Permit Application. Each Department shall review, as part of their review provided under Section 3.18.7(4) and (5), and provide a recommendation to the BPCD. The BPCD shall approve the EOP as part of the issuance of the Battery Storage Special Permit. The approved copy shall also be placed in an approved location to be accessible to facility personnel, fire code officials, and emergency responders. The EOP shall include the following information:
- a. Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions.
 - b. Procedures for inspection and testing of associated alarms, interlocks, and controls.
 - c. Procedures to be followed in response to notifications from the Battery Energy Storage Management System, when provided, that could signify potentially dangerous conditions, including shutting down equipment, summoning service and repair personnel, and providing agreed upon notification to fire department personnel for potentially hazardous conditions in the event of a system failure.
 - d. Emergency procedures to be followed in case of fire, explosion, release of liquids or vapors, damage to critical moving parts, or other potentially dangerous conditions. Procedures can include sounding the alarm, notifying the fire department, evacuating personnel, de-energizing equipment, and controlling and extinguishing the fire.

- e. Response considerations similar to a safety data sheet (SDS) that will address response safety concerns and extinguishment when an SDS is not required.
- f. Procedures for dealing with battery energy storage system equipment damaged in a fire or other emergency event, including maintaining contact information for personnel qualified to safely remove damaged battery energy storage system equipment from the facility.
- g. Other procedures as determined necessary by The Town of Athol to provide for the safety of occupants, neighboring properties, and emergency responders.
- h. Procedures and schedules for conducting drills of these procedures and for training local first responders on the contents of the plan and appropriate response procedures.

3.30.8 Special Permit Standards

- A. Setbacks. Tier 2 Battery Energy Storage Systems shall have a minimum setback of 200 feet from the front yard and 75 feet from the side and rear yards.
- B. Height. Tier 2 Battery Energy Storage Systems shall comply with the building height limitations for principal structures of the underlying zoning district.
- C. Fencing Requirements. Tier 2 Battery Energy Storage Systems, including all mechanical equipment, shall be enclosed by a 7.5-foot-high fence that shall be placed 6 inches off the ground to allow migration of wildlife with man gates installed that are to be self-closing and self-latching to prevent unauthorized access unless housed in a dedicated-use building and not interfering with ventilation or exhaust ports. In addition, each man gate shall have an Emergency Access System Knox padlock or box at each gate and access is to be maintained for easy opening by Fire and Rescue personnel.
- D. Screening and Visibility. Tier 2 Battery Energy Storage Systems shall have views minimized to the extent reasonably practicable from adjacent properties using architectural features, earth berms, landscaping, or other screening methods that will harmonize with the character of the property and surrounding area and not interfering with ventilation or exhaust ports.
- E. Ownership Changes. If the owner of the battery energy storage system changes or the owner of the property changes, the special use permit shall remain in effect, provided that the successor owner or operator assumes in writing all of the obligations of the special use permit, site plan approval, and decommissioning plan. A new owner or operator of the battery energy storage system shall notify the Zoning Enforcement Officer of such change in ownership or operator within [30] days of the ownership change. A new owner or operator must provide such notification to the Zoning Enforcement Officer in writing. The special use permit and all other local approvals for the battery energy storage system would be void if a new owner or operator fails to provide written notification to the Zoning Enforcement Officer in the required timeframe. Reinstatement of a void special use permit will be subject to the same review and approval processes for new applications under this Local Law.

3.30.9 Safety

- A. System Certification. Battery energy storage systems and equipment shall be listed by a Nationally Recognized Testing Laboratory to UL 9540 (Standard for battery energy storage systems and Equipment) with subcomponents meeting each of the following standards as applicable:
 - 1) UL 1973 (Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail Applications),
 - 2) UL 1642 (Standard for Lithium Batteries),
 - 3) UL 1741 or UL 62109 (Inverters and Power Converters),
 - 4) Certified under the applicable electrical, building, and fire prevention codes as required.
 - 5) Alternatively, Field evaluation by an approved testing laboratory for compliance with UL 9540 and applicable codes, regulations and safety standards may be used to meet system certification requirements.
- B. Site Access. Battery energy storage systems shall be maintained in good working order and in accordance with industry standards. Site access shall be maintained and secured in accordance with Section 8(C), including snow removal at a level acceptable to the local fire department.
- C. Battery energy storage systems, components, and associated ancillary equipment shall have required working space clearances, and electrical circuitry shall be within weatherproof enclosures marked with the environmental rating suitable for the type of exposure in compliance with NFPA 70.

3.30.10 Abandonment

The battery energy storage system shall be considered abandoned when it ceases to operate consistently for six months. If the owner and/or operator fails to comply with decommissioning upon any abandonment, The Town of Athol may, at its discretion, enter the property and utilize the available bond and/or security for the removal of a Tier 2 Battery Energy Storage System and restoration of the site in accordance with the decommissioning plan. The Board of Planning and Community Development may allow an additional six month period for the battery storage system to not be considered abandoned upon request of the owner and/or operator, based upon a good cause determination by the Board to grant such an extension.

3.30.11 Severability

The invalidity or unenforceability of any section, subsection, paragraph, sentence, clause, provision, or phrase of the aforementioned sections, as declared by the valid judgment of any court of competent jurisdiction to be unconstitutional, shall not affect the validity or enforceability of any other section, subsection, paragraph, sentence, clause, provision, or phrase, which shall remain in full force and effect.

And to amend the Athol Zoning Bylaws, Article IV, Definitions, by adding the following definitions of terms related to battery storage energy systems within Section 4.1, Definitions;

ANSI: American National Standards Institute

BATTERY(IES): A single cell or a group of cells connected together electrically in series, in parallel, or a combination of both, which can charge, discharge, and store energy electrochemically. For the purposes of this law, batteries utilized in consumer products are excluded from these requirements.

BATTERY ENERGY STORAGE MANAGEMENT SYSTEM: An electronic system that protects energy storage systems from operating outside their safe operating parameters and disconnects electrical power to the energy storage system or places it in a safe condition if potentially hazardous temperatures or other conditions are detected.

BATTERY ENERGY STORAGE SYSTEM: One or more devices, assembled together, capable of storing energy in order to supply electrical energy at a future time, not to include a stand-alone 12-volt car battery or an electric motor vehicle. A battery energy storage system is classified as a Tier 1 or Tier 2 Battery Energy Storage System as follows:

- A. Tier 1 Battery Energy Storage Systems have an aggregate energy capacity less than or equal to 600kWh and, if in a room or enclosed area, consist of only a single energy storage system technology.
- B. Tier 2 Battery Energy Storage Systems have an aggregate energy capacity greater than 600kWh or are comprised of more than one storage battery technology in a room or enclosed area.

CELL: The basic electrochemical unit, characterized by an anode and a cathode, used to receive, store, and deliver electrical energy.

COMMISSIONING: A systematic process that provides documented confirmation that a battery energy storage system functions according to the intended design criteria and complies with applicable code requirements.

DEDICATED-USE BUILDING: A building that is built for the primary intention of housing battery energy storage system equipment, is classified as Group F-1 occupancy as defined in the International Building Code, and complies with the following:

- 2) The building's only use is battery energy storage, energy generation, and other electrical grid-related operations.
- 3) No other occupancy types are permitted in the building.
- 4) Occupants in the rooms and areas containing battery energy storage systems are limited to personnel that operate, maintain, service, test, and repair the battery energy storage system and other energy systems.
- 5) Administrative and support personnel are permitted in areas within the buildings that do not contain battery energy storage system, provided the following:
 - a. The areas do not occupy more than ten [10] percent of the building area of the story in which they are located.

- b. A means of egress is provided from the administrative and support use areas to the public way that does not require occupants to traverse through areas containing battery energy storage systems or other energy system equipment.

NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL): A U.S. Department of Labor designation recognizing a private sector organization to perform certification for certain products to ensure that they meet the requirements of both the construction and general industry OSHA electrical standards.

NEC: National Electric Code.

NFPA: National Fire Protection Association.

NON-DEDICATED-USE BUILDING: All buildings that contain a battery energy storage system and do not comply with the dedicated-use building requirements.

NON-PARTICIPATING PROPERTY: Any property that is not a participating property.

NON-PARTICIPATING RESIDENCE: Any residence located on non-participating property.

PARTICIPATING PROPERTY: A battery energy storage system host property or any real property that is the subject of an agreement that provides for the payment of monetary compensation to the landowner from the battery energy storage system owner (or affiliate) regardless of whether any part of a battery energy storage system is constructed on the property.

Or act in relation thereto.

Article 5: To see if the Town will vote to amend the Athol Zoning Bylaws by amending Article II, Section 2.3, Other Uses by changing the permitted use category of Ground-Mounted Solar Photovoltaic Installations from Y (a permitted use by-right) to SP (use authorized under Special Permit) in the RC zoning district) and from SP to N (not allowed) in the RA, RB, CA, CB, G, and I zoning districts as follows by deleting the following language:

2.3 Use Regulation Schedule

Ground-Mounted Solar Photovoltaic Installations

<u>RA</u>	<u>RB</u>	<u>RC</u>	<u>CA</u>	<u>CB</u>	<u>G</u>	<u>I</u>
SP	SP	Y	SP	SP	SP	SP

and replacing it with:

Ground-Mounted Solar Photovoltaic Installations	N	N	SP	N	N	N	N
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Or act in relation thereto.

Article 6: To see if the town will vote to amend the Athol Zoning Bylaws, Article III, by Deleting the existing Section 3.24, Ground-Mounted Solar Photovoltaic Installations, in its entirety and replacing with the following new text in its place.

3.24.1 Purpose

The purpose and intent of this bylaw is to provide standards for the placement, design, construction, operation, monitoring, modification and removal of ground-mounted solar photovoltaic installations which address public safety, minimize impacts on scenic, natural and historic resources and to provide adequate financial assurance for the eventual decommissioning of such installations. The provisions set forth in this section shall apply to the placement, design, construction, operation, maintenance and/or repair, and environmental effects of ground-mounted solar photovoltaic installations.

This bylaw aims to balance the rights of landowners to use their land with the corresponding right of abutting and neighboring landowners to live without undue disturbance from noise, traffic, lighting, signage, smoke, fumes, dust, odor, glare, or storm water runoff. To maintain the character of the Town of Athol as a small New England village, this bylaw aims to retain the natural beauty, aesthetic appeal, historic value and scenic attraction of the Town for both residents and tourists.

3.24.2 Applicability

This bylaw applies to commercial and residential ground-mounted solar photovoltaic installations greater than 10,000 square feet proposed to be constructed after the effective date of this bylaw. This bylaw also pertains to physical modifications that materially alter the type, configuration or size of the installation. Square footage shall be calculated as follows:

- i. The area within the security fence if a fence is provided, or
- ii. All land area within a polygon (a plane shape-two dimensional-with straight sides) around the entire installation including all solar panels, all appurtenances including but not limited to buildings, storage areas, construction staging and lay-down areas, and transformers and poles, and parking along with a 15 foot perimeter area around all of the above or
- iii. All areas of disturbed land, whichever is greater.

As defined in 3.24.2:

- a) This bylaw does not pertain to ground-mounted solar photovoltaic installations installed on residential, commercial or industrial buildings. Those installations are subject to the State Building Code.
- b) Ground-mounted solar photovoltaic installations less than or equal to 10,000 square feet shall only need a building permit and meet property setback requirements.
- c) This bylaw does not pertain to solar carport canopies over existing rows of parking spaces. Such installations are considered Accessory Uses under Section 2.3 and are subject to the State Building Code.
- d) This bylaw shall not apply to any ground-mounted solar photovoltaic installation being developed with the direct involvement of the Town of Athol at the former municipal landfill on West Royalston Road in Athol, MA.

3.24.3 Special Permit Granting Authority

Subject to the requirements of this bylaw, ground-mounted solar photovoltaic installations may be permitted in the R-C Zoning District subject to a Special Permit from the Athol Board of Planning and Community Development, pursuant to meeting the Special Permit Criteria and Requirements below. The Board of Planning and Community Development shall be the Special Permit Granting Authority for ground-mounted solar photovoltaic installations. In addition to the findings required in Section 1.2.6.2, the Special Permit Granting Authority must also find that the proposal does not contravene the

purposes of this section. Ground-mounted solar photovoltaic installation Special Permit applications shall be filed in accordance with the Board of Planning and Community Development Filing Requirements & Fees.

3.24.4 Requirements for Ground-Mounted Solar Photovoltaic installations

The following requirements shall apply to ground mounted solar photovoltaic installations greater than 10,000 square feet.

1. Compliance with Laws, Bylaws and Regulations

The construction and operation of ground-mounted solar photovoltaic installations shall comply with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, electrical, and communications requirements. All buildings, fixtures and other appurtenance structures forming part of a ground-mounted solar photovoltaic installation shall be constructed in accordance with the State Building Code.

2. Building Permit

No ground-mounted solar photovoltaic installation shall be constructed, installed or modified as provided in this section without first obtaining a building permit

3. Pre-application Conference and Public Outreach

The applicant shall participate in a pre-application conference with the Board of Planning and Community Development prior to the submittal of a formal application. A public outreach plan, including project development timeline, which indicates how the applicant will meet the required site plan review notification procedures and otherwise inform the abutters and the town residents, shall be provided as part of the pre-application conference process. The applicant shall be required to erect a 4-foot by 4-foot double-sided sign perpendicular to the road at the proposed entrance to the project site prior to the pre-application conference.

The sign shall be headed with the following: Notice: This property is the site of a proposed commercial ground-mounted solar photovoltaic installation in accordance with Section 3.24 of the Athol Zoning Bylaw. The sign shall also indicate the name of the applicant, the name of the owner of the installation, the size of the proposed facility in both acreage and MW, a contact person for additional information including phone and email address, and assessors plot number for the property.

4. Site Plan Review

Ground-mounted solar photovoltaic installations greater than 10,000 square feet shall undergo site plan review by the Board of Planning and Community Development (BPCD) prior to construction, installation or modification as provided in this section as well as section 3.18, Site Plan Review, as applicable. The BPCD shall act as the Special Permit Granting Authority for such site plans with the entirety of the Town of Athol, including the Major Commercial Overlay District.

3.24.4.5 Professional Engineer

All plans and maps shall be prepared, stamped, and signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts.

3.24.4.6 Required Documents to be deemed a complete application.

Pursuant to the site plan review process, the applicant shall also provide the following documents:

(a) A site plan showing:

- i. Property lines and physical features, including both existing and proposed roads, for the project site at a scale of 1 inch equals 40 feet or such scale as may be approved by the Special Permit Granting Authority on standard 24" by 36" sheets and continuation on 8.5 " by 11" sheets as necessary for narrative;
- ii. Blueprints or drawings of the solar photovoltaic installation showing the proposed layout of the system;
- iii. One or three line electrical diagram detailing the solar photovoltaic installation, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and overcurrent devices;
- iv. Proposed wattage of the solar photovoltaic installation solar power generation indicated in both dc (direct current) and ac (alternating current); a notation shall be included explaining the difference, e.g. loss in conversion from dc to ac;
- v. Technical specification of the major system components to be used, including the PV panels, mounting system, and inverter and battery storage;
- vi. Name, address, and contact information for proposed system installer (owner);
- vii. Name, address, phone number and signature of the applicant, as well as all co-proponents or property owners;
- viii. Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures;
- ix. All existing lot lines, with size of each existing lot in acres or square feet, abutting land uses and location of structures within 500 feet of the site;
- x. Names and addresses of all record owners within 500 hundred feet of all property lines along with a map showing the same;
- xi. Locations and details of all security measures for the site;
- xii. Documentation of all soils types, as identified on the United States Natural Resources Conservation Service soils survey, on all land involved with the project;
- xiii. Provision of water including that needed for fire protection;
- xiv. Location of all existing trail networks and woods roads, stonewalls, and historic features;
- xv. All storm water plans as required in Section 3.24.5.11;
- xvi. A calculation of slopes throughout the site as a percentage over consecutive 100-foot distances;
- xvii. A buffer, screening and landscape plan as required in Section 3.24.3;
- xviii. Location and approximate height of tree cover on the site at the time of application filing.
- xix. Location, type of fixture, and height of any proposed lighting as well as documentation of Dark Sky Standards in accordance with Section 3.24.5.7;
- xx. Location of equipment and construction staging area, and

(b) The name, contact information and signature of any agents representing the applicant;

(c) A glare analysis and proposed mitigation, if any, to minimize the impact on affected properties and roads, as well as the Orange airport in regards to the proposed solar panels as required in Section 3.24.5.5;

- (d) Names and addresses of all record owners within 500 hundred feet of all property lines along with a map showing the same;
- (e) Documentation by an acoustical engineer of the noise levels projected to be generated by both the installation and operation of the facilities as required in Section 3.24.5.13;
- (f) Documentation of all soils types, as identified on the United States Natural Resources Conservation Service soils survey, on all land involved with the project;
- (g) Documentation of actual or prospective access and control of the project site as required in Section 3.24.7;
- (h) Visual impact analysis as required in Section 3.24.5.5;
- (i) A complete list of chemicals, fuels, and any other hazardous materials to be used in both the construction and operation phase;
- (j) A calculation of earthwork operations listing the amount of soil and rock to be imported or exported from the site. If any material is to be imported, such material shall clean and without contamination by hazardous substances or invasive species and must be obtained from a source(s) approved by the Athol DPW.
- (k) Mitigation Plan as required in Section 3.24.5.4;
- (l) A list identifying all off-site electrical system improvements necessary to the electrical grid to accommodate the power from the proposed installation and identification of what entity is paying for such improvements.

3.24.4.7 Waiver of Submittal Requirements: Upon the written request of the applicant with justification, the Special Permit Granting Authority may waive any of its submission requirements under unique site conditions. In addition, the Special Permit Granting Authority may request any additional data needed to render its decision.

3.24.5 Design Standards

1. Lot and Siting Requirements

- i. Ground-mounted commercial solar photovoltaic array installations shall be permitted on parcels larger than 10 acres located within the RC zoning district and shall have a minimum lot frontage of 160 feet.
- ii. Project generation size shall not exceed 5MW AC, nor shall the installation exceed 20 acres of fenced area, if fenced. If not fenced, the 20 acre area shall be calculated as the area within a polygon around the entire installation including all solar arrays, all appurtenances including but not limited to buildings, storage areas, construction staging and lay-down areas, transformers and poles along with a 15 foot perimeter area around all of the above
- iii. No portion of a ground-mounted commercial solar photovoltaic array installation:
 - a. Shall be constructed on slopes greater than 10%, (measured over 100-foot intervals.) Cutting and filling to reduce natural slopes shall be prohibited except on short hollows, depressions or high spots. A waiver to increase the slope from 10% to 12% may be requested.
 - b. Shall be located on any parcel that contains 50% of Priority Habitat, Core Habitat or Critical Natural Landscape as defined in 225 CMR 20.00 Solar Massachusetts Renewable Target (SMART) Program, nor shall any trees be removed, or construction of structures, access roads or transmission lines may be placed in these designated areas.

- iv. Ground-mounted solar photovoltaic installations shall be permitted only on previously disturbed areas* with an option of adding additional area through land clearing.

If less than 20 acres of contiguous or nearly contiguous previously disturbed area is not present on the lot, then land clearing of up to 5 acres of non-previously disturbed area is allowed for the installation. The acreage for clearing of non-previously disturbed area may be increased to a maximum of 10 acres with a proper waiver request from the developer and with the approval of the waiver request by the Board as authorized under Section 3.24.17. At least 50% of the area of any such installation, with or without a waiver, shall be located on previously disturbed areas.

*Previously disturbed areas shall mean land that meets any one of the following conditions at the time of adoption of these bylaws:

1. Land where the original grade and native material has been altered and/or removed for previous development.
2. Land where ALL existing vegetation has been removed for previous development.
3. Land utilized for sand, gravel or rock excavation.
4. Land that has been utilized for agricultural purposes.

Land that has been utilized for Silviculture*, whether under the Massachusetts Forest Cutting Practices Act (FCPA) or not, or for any of the activities exempt under the FCPA, shall not be considered previously disturbed areas.

*Definition from the UD Forest Service: Silviculture is the art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society such as wildlife habitat, timber, water resources, restoration, and recreation on a sustainable basis

- v. Location of the entrance road and all utility poles shall be located within the lot's frontage taking into consideration site lines for vehicular traffic and to lessen any visual impacts on abutters.

2. Setbacks and Height

- i. For all zoning districts except for the Rural Single-Family Residential (RC) zoning district, ground-mounted solar photovoltaic installations must observe all yard requirements applicable to the principal structure as defined in Section 2.6, Intensity of Use Schedule. The Special Permit Granting Authority may increase these setbacks in these districts if they determine it to be appropriate.

- ii. For the RC zone, setbacks shall be:

- 200 feet for front yard*
- 200 feet for side and rear yard*
- 200 feet from any perennial stream**
- 200 feet from any water body greater than 1 acre and less than 5 acres**
- 400 feet from the shoreline of any water body greater than 5 acres**

- * The Special Permit Granting Authority may reduce the minimum setback distance for front, side and rear yards only in the RC District to a minimum of 75 feet as authorized per Section 3.24.17. In addition to the specifics of Section 3.24.17, the applicant shall also be required to submit written consent from all affected abutter(s) for any reduction in setbacks.

However, reduction of the setback on any frontage with a public road is not permitted whether the yard is a front, side or rear yard. The setback between properties of a single owner subdivided per Section 3.24.5.4.4 may be waived to no less than the minimum for existing setback requirements of the RC District per Section 2.6.

- **The setbacks for perennial streams and water bodies between 1 and 5 acres are not subject to any waiver of distances under Section 3.24.13. Setbacks for water bodies greater than 5 acres are only allowed to be reduced through a waiver to a minimum distance of 300 feet as long as a natural wooded buffer is maintained, detailed stormwater plans show no further impact to abutting properties versus the 400-foot setback distance, water quality of runoff is not reduced and wildlife and fauna movement is not restricted with the reduced setback. No access roads or transmission lines may be constructed in the setbacks to any water body greater than 1 acre.

iii. All ground mounted photovoltaic panels in a residential zone shall be limited to a height of 10 feet. For any other zone, the height shall be limited to 15 feet. Other appurtenance structures shall be limited to a height of 15 feet in all zones.

3. Vegetated Buffer, Screening and Landscaping

1. Ground-mounted solar photovoltaic installations shall be effectively screened year-round:
 - i. from all abutting properties in all residential zones;
 - ii. from all abutting properties in residential use in all non-residential zones;
 - iii. and from public and private ways in all residential districts.

Except for vehicular and pedestrian passageways and permitted signs, setback areas shall be modified only for additional screening. Where existing vegetation in the setbacks is insufficient to achieve year-round screening, additional screening shall be provided including, but not limited to, planting of dense vegetative screening, fencing, berms, natural ground elevations, land contouring, and/or placement of the solar panels and appurtenant structures on the site, all depending on site specific conditions.

Tree cutting within the required setback area shall not be permitted if it would reduce to any degree the effectiveness of the year-round screening.

2. If additional plantings are required for screening, a planting plan shall be submitted:
 - i. Showing the types, sizes and locations of material to be used which shall be subject to the approval of the Special Permit Granting Authority.
 - ii. Plantings shall be a minimum of six (6) feet in height at planting and staggered so as to fill the setback area and keep the arrays from view year round.
 - iii. Using a diversity of plant species native to New England for any screens and vegetative erosion controls. Use of exotic plants, as identified by the most recent version of the

“Massachusetts Prohibited Plant List” maintained by the Massachusetts Department of Agricultural Resources, is prohibited. Cultivars of native plants are acceptable.

iv. At least 75% of the plantings shall consist of evergreens and shall be evenly spaced throughout the area of the setback area.

3. Planting of the vegetative screening shall be completed prior to connection of the installation. Plants shall be maintained and replaced if unhealthy by the owner/operator of the installation for the life of the installation.
4. The open area of the site shall be seeded with a pollinator mix and maintained as bird and insect habitat. Mowing is to be done as little as possible to retain a natural functioning of the landscape. Alternative vegetation or cover options may be proposed by the applicant in consideration of soil type and quality, subject to the approval of the Special Permit Granting Authority. Gravel areas that are well drained and stable do not require the addition of topsoil. Topsoil shall not be imported into any project sites unless there is a demonstrated engineering need and must be approved by the Special Permit Granting Authority prior to any introduction. The need to introduce topsoil may be grounds for permit denial.
5. Clearing of natural vegetation shall be limited to what is necessary for the construction, operation, and maintenance of the installation. Existing root structures, flat gravel areas, and topsoil shall be maintained to the maximum extent practicable.
6. Vegetation Management: Herbicides, pesticides, or chemical fertilizers shall not be used to manage vegetation at the ground mounted solar photovoltaic installation.
7. Ground surface areas beneath solar arrays and setback areas shall be pervious to maximize on-site infiltration of stormwater.

4. Mitigation

1. The Special Permit Granting Authority shall discuss construction phasing with the designer of the installation as a means of mitigating erosion and sedimentation.
2. Habitat Fragmentation. A ground-mounted solar photovoltaic installation shall, to the greatest extent practicable, be clustered and located in or adjacent to areas of the site where the land has already been cleared of vegetation to avoid habitat fragmentation.
3. Invasive Species. The introduction of invasive species shall be prevented to the greatest extent practicable, during any construction or removal of a solar photovoltaic installation, through the use of current best practices.
4. A ground-mounted solar photovoltaic installation shall be considered the principal use of the parcel. Any parcel with an existing residence or other building may be approved for a solar installation with the provision that the residence or building be subdivided from the larger parcel prior to any construction of the solar installation. The parcel with the ground-mounted solar photovoltaic installation may not be subdivided for the purpose of development of the divided land until such time as the installation is decommissioned.

5. Visual Impacts and Glare

1. The design of the ground-mounted solar photovoltaic installations shall prevent reflected solar radiation or glare from becoming a public nuisance or hazard to adjacent buildings, roadways, or properties. Design efforts may include, but not be limited to, deliberate placement and arrangement on the site, anti-reflective materials, solar glare modeling, and screening in addition to required landscaping.
2. Any ground-mounted solar photovoltaic array installation proposed within a 5-mile radius of the Orange Airport shall be analyzed for glare utilizing any glare analysis compatible with FAA glare guidelines. [One such software package is Forge Solar, PV Planning and Glare Analysis.]
3. Ground-mounted solar photovoltaic installations shall not be approved unless the system design provides screening and buffers to protect scenic vistas and view sheds from residential uses, public streets and any waterways or water bodies.
4. A visual impact assessment shall be conducted that follows the protocols of the "Guidelines for Landscape and Visual Impact Assessment (Third Addition)". Such assessment shall produce a map showing all areas within a 5-mile radius of the installation where the installation can be seen and where it cannot be seen.

With input from the Planning Director, the applicant shall utilize additional tools to assess the visual impacts in critical areas of concern such as renderings, line-of-sight studies and/or two or three dimensional visualizations i.e. Photomontage, video montage, animation produced through Spatial Information Systems (SIS) and Geographic Information Systems (GIS).

5. All results of the visual impact assessment shall be taken into account in the design of the installation. When reviewing for compliance with section 3.24.3 Vegetated Buffer, Screening and Landscaping and scenic vistas in Section 3.24.5.3, the Special Permit Authority shall make a definitive judgment that the intent has been achieved.

3.24.5.6 Appurtenant Structures:

All appurtenant structures to ground-mounted solar photovoltaic installations shall be subject to reasonable regulations concerning the bulk and height of structures, lot area, setbacks, and open space, parking and building coverage requirements.

All such appurtenant structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other. Whenever reasonable, structures shall be shielded from view by vegetation approved by the Special Permit Granting Authority and/or joined or clustered to avoid adverse visual impacts.

3.24.5.7 Lighting:

Lighting of ground-mounted solar photovoltaic installations shall be consistent with local, state and federal law.

Lighting of other parts of the installation, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. All lighting shall comply with International Dark Sky Standards FSA Certification Requirements. There shall be no illumination without personnel on site.

3.24.5.8 Signs:

The following signs shall be required:

- i. one that identifies the owner, the street address, provides a 24-hour emergency contact phone
- ii. educational signs providing information about solar photovoltaic panels and the benefits of renewable energy.

Signs shall comply with Section 3.9, Sign Regulations.

Ground-mounted solar photovoltaic installations shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the solar photovoltaic installation.

3.24.5.9 Utility Connections:

Utility connections, as determined by the Special Permit Granting Authority, shall be underground, depending on appropriate soil conditions, shape, and topography of the site and any requirements of the utility provider.

3.24.5.10 Fencing:

The need for fencing shall be determined by the applicant unless such fencing is needed to comply with Section 3.24.3 Vegetated Buffer, Screening and Landscaping, and/or as required per the National Electrical Code. If installed, such fencing shall be no more than 10 feet tall, shall be placed 6 inches off the ground to allow migration of wildlife, and shall have an Emergency Access System padlock or box at each gate.

3.24.5.11 Stormwater and Erosion Control

1. Proposed stormwater management plans detailed below shall conform to the more stringent of any conditions or standards of this subsection and the Department of Environmental Protection's Massachusetts Stormwater Handbook, as amended.
2. All stormwater infrastructure shall be owned and maintained by the owner of the installation and shall be located on the same parcel as the solar installation.
3. All post-development stormwater, up to and including a 50-year return frequency 24-hour storm, shall be retained on the parcel site and infiltrated into the soil thru low impact development, retention and infiltration basins. At no time may stormwater be carried off site.

Emergency overflows for storms in excess of the 50-year return frequency may be permitted provided it is demonstrated that no flooding or damage would be caused by the overflow. Attenuation of the discharge may be required as needed as determined by the Special Permit Granting Authority.

4. All pipes, catch basins and other materials utilized in the stormwater facilities shall be approved by the Athol Superintendent of Public Works, or his designee.

5. Stormwater Management Plan

- i. The Stormwater Management Plan (four paper copies and one electronic copy in PDF format required) with the permit application shall contain sufficient information for the Special Permitting Granting Authority to evaluate the environmental impact and effectiveness of the measures proposed for retaining stormwater on the parcel site.
- ii. The Stormwater Management Plan shall fully describe the project in drawings, narrative and calculations. It shall include:
 - a. The site's existing and proposed topography with contours at 2-foot intervals;
 - b. A description and delineation of existing stormwater conveyances, impoundments, environmental resources on or adjacent to the site into which stormwater could flow;
 - c. A delineation of 100-year flood plains, if applicable;
 - d. Estimated seasonal high groundwater elevation in areas to be used for stormwater retention, detention, or infiltration;
 - e. The existing and proposed vegetation and ground surfaces with areas and runoff coefficients for each;
 - f. Calculations for the 2-year, 10 year and 50 year return period utilizing NCRS TR 55 Handbook. Pipe sizes, depth of flow, capacities and velocities shall be included;
 - g. All pipes shall be a minimum 12-inch diameter.
 - h. A drainage area map showing pre- and post-construction watershed boundaries, area and stormwater flow paths at a scale that enables verification of supporting calculations;
 - i. A recharge area analysis that calculates pre-and post-project annual groundwater recharge rates on the parcel;
 - j. A description and drawings of all components of the proposed stormwater management system;
 - k. Hydrologic and hydraulic design calculations for the pre-development and post- development conditions for the design storms specified in the Massachusetts Stormwater Handbook;
 - l. Soils information from test pits performed at the location of proposed Stormwater Management facilities, including soil descriptions, depth to seasonal high groundwater and depth to bedrock. Soils information will be based on site test pits logged by a Massachusetts Certified Soil Evaluator.
6. To ensure proper containment and stabilization of the site during the construction phase, a Stormwater Pollution Plan to control construction-related impacts, including erosion, sedimentation, and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented. Such plan shall be developed to document compliance with Standard 8 of the Massachusetts Stormwater Handbook.
7. A Long -Term Stormwater Operation and Maintenance (O&M) Plan shall be developed and implemented to ensure that stormwater management systems function as designed. Such plan shall be developed to document compliance with Standard 9 of the Massachusetts Stormwater Handbook.

The Long-Term Stormwater Operation and Maintenance Plan shall at a minimum include:

- i. Stormwater management system(s) owners;

- ii. The party or parties responsible for operation and maintenance of all aspects of the stormwater management system;
- iii. The routine and non-routine maintenance tasks to be undertaken after construction is complete and a schedule for implementing those tasks;
- iv. A plan that is drawn to scale and shows the location of all stormwater BMPs;
- v. A schedule for routine inspections as well as a description of storms that would trigger immediate inspections following the storm;
- vi. An inspection and maintenance log form
- vii. An estimated stormwater operations and maintenance budget.
- viii. Permission from the operator to allow agents of the Town of Athol to enter and inspect the premises to evaluate and ensure that the responsibility party complies with the Long-Term Stormwater Operation and Maintenance Plan requirements for each BMP.

- 8. During times of construction and post-construction where stormwater generated from the project area may inadvertently enter the public way, the developer (owner) shall be responsible for direct costs incurred by the town, including but not limited to stormwater related clean up, sanding, salting, street sweeping or other necessary management when required for the protection of public health and safety.

12. Hazardous Materials:

Hazardous materials stored, used, or generated on site shall not exceed the amount for a Very Small Quantity Generator of Hazardous Waste as defined by the DEP pursuant to Mass DEP regulations 310 CMR 30.000 and shall meet all requirements of the DEP including storage of hazardous materials in a building with an impervious floor that is not adjacent to any floor drains to prevent discharge to the outdoor environment.

If any hazardous materials, including, but not limited to, lithium ion (storage batteries) are used within the solar electric equipment, then impervious containment areas capable of controlling and containing any release of hazardous materials to the environment and to prevent potential contamination of groundwater are required. A list of any hazardous materials proposed to be located on the site and a plan to prevent their release shall be provided to the Special Permit Granting Authority and Fire Chief.

13. Noise

Noise generated by ground-mounted solar photovoltaic installations, cooling fans, inverters, associated equipment and machinery shall conform at a minimum to applicable state and local noise regulations, including the DEP's Division of Air Quality noise regulations, 310 CMR 7.10 and 3.8.1.1 of the Athol Zoning Bylaw. Noise reduction shall be considered and incorporated as needed during the design phase of the installation including the location of the noise generator, shielding, noise cancellation, filtering, and noise suppression.

3.24.6. Site Plan Review Criteria: In addition to the criteria under Section 3.18.8, the Special Permit Granting Authority shall consider the following matters during Site Plan Review and shall either approve or deny a special permit upon its determination that such matters have or have not been satisfactorily addressed:

- 1. The right of abutting and neighboring landowners to live without undue disturbance from noise, traffic, lighting, fumes, dust, odor, glare, or stormwater runoff;

2. The adequacy of methods to store, handle, or dispose of wastes, including hazardous materials, to protect air, groundwater, and surface water pollution;
 3. The protection of historical and natural environmental features on the site under review and in adjacent areas;
 4. The adequacy of stormwater management systems to address non-point-source pollution.
 5. Minimization of erosion of soil both during and after construction.
 6. In the case of a residential zone location, the visual impact of the installation on its immediate abutters and the nearby neighborhood have been effectively neutralized through its location on the lot, appropriate design, landscaping and effective screening.
 7. The location of the site and the system design provides effective screening and buffers to protect scenic vistas and view sheds from residential uses, public streets, recreational areas and any waterways or water bodies, and
 8. The rural character of the general location has been maintained.
- 3.24.7 Site Control: The applicant shall submit documentation of actual or committed prospective access and control of the project site to allow for construction and the operation of the proposed ground-mounted solar photovoltaic installation.
- 3.24.8 Operation and Maintenance Plan: The installation owner or operator shall maintain the facility in good condition. The applicant shall submit a plan for the operation and maintenance of the ground-mounted solar photovoltaic installation along with a signed agreement with a maintenance company. This plan shall include measures for maintaining year-round safe access for emergency vehicle, snow plowing, storm water controls, and general procedures and a yearly schedule for the operation and maintenance of the facilities including fencing, and maintenance of landscaping.
- 3.24.9 Utility Notification: The applicant shall submit evidence satisfactory to the Special Permit Granting Authority that the utility company operating the electrical grid has been informed in writing of the intent to install a ground-mounted solar photovoltaic installation and intends to file an Interconnect Agreement in the future and that the utility company has responded in writing acknowledging the plan. Any off-grid system shall be exempt from this requirement.
- 3.24.10 Emergency Services: The applicant shall provide a copy of the project summary, operation and maintenance plan, electrical schematic, and site plan to the Athol Fire and Police Departments. The applicant and the installation operator shall cooperate with local and regional emergency services in developing an emergency response plan, which will ensure that emergency personnel have immediate, 24-hour access to the facility.

All means of shutting down the solar installation shall be clearly marked on the plan. The operator of the installation shall identify an official representative for public inquiries throughout the life of the installation.

The operation and maintenance plan required in Section 3.24.8 shall be periodically jointly reviewed and updated as necessary by the operator of the installation and the Athol Fire and Police Departments at a frequency to be determined by the Athol Fire Department. Safety personnel may request at any time that the operator provide onsite training in accessing and shutting down the operation of the installation.

The operator shall identify a qualified contact person who will provide assistance to local officials during an emergency. The operator shall update the contact information whenever there is a change in the contact person.

- 3.24.11 Annual Reporting: The owner or operator of a solar installation shall submit an annual report demonstrating and certifying compliance with the Operation and Maintenance Plan, the requirements of this bylaw, and approvals granted hereunder, including but not limited to continued management and maintenance of vegetation, compliance with the approved plans and any permit conditions, continuation of liability insurance, and adequacy of road access and functionality of stormwater management system. The annual report shall also provide information on the maintenance completed during the course of the year and the amount of electricity generated by the facility. The report shall be submitted to the Board of Selectmen, Special Permit Granting Authority, Fire Chief, and Conservation Commission (if a wetlands permit was issued) no later than 45 days after the end of the calendar year.
- 3.24.12 Modifications: All material modifications to the installation to be made after the issuance of the initial required building permit shall require approval of the Special Permit Granting Authority through a permit modification.
- 3.24.13 Discontinuance and Removal: Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, any ground-mounted solar photovoltaic installation not used for a period of one continuous year or more without written permission from the Special Permit Granting Authority, or is operating at less than 25% of its nameplate capacity shall be considered to be discontinued and shall be removed by the owner.

Upon written request from the Building Inspector addressed to the contact address provided and maintained by the owner or operator as required, the owner or operator shall provide evidence to the Building Inspector demonstrating continued use of the installation. Failure to provide such evidence within thirty days of such written request shall be conclusive evidence that the installation has been discontinued.

The owner or operator or landowner shall physically remove the installation no more than 180 days after the date of discontinued operation. The owner or operator or landowner shall notify the Special Permit Granting Authority by certified mail of the proposed date of discontinued operations and submit plans for removal. Removal shall consist of:

1. Physical removal of all parts of and appurtenances of the installation including solar arrays, structures, equipment, security barriers and transmission lines.
2. Recycling of all possible materials and disposal of remaining solid and hazardous wastes in accordance with state and federal waste disposal regulations applicable at the time of disposal.
3. Stabilization and revegetation of the site as necessary to minimize erosion and prevent impacts to wetlands, water courses or water bodies. The Special Permit Granting Authority may allow the owner or operator or landowner to leave landscaping or designated below grade foundations (provided they are filled in) in order to minimize erosion and disruption of existing vegetation. This requirement may be waived if the landowner submits a plan for re-use of the site.
4. Any portion of a site that was deforested for the installation shall be restored so as to encourage native tree growth, including the planting of seedlings, if necessary to establish growth.

As a condition of the Special Permit approval, the applicant and the landowner shall agree to allow entry to remove an abandoned or decommissioned installation. If the owner or operator or land owner fails to remove the installation in accordance with the requirements of this section, the Town of Athol shall have the right, to the extent it is otherwise duly authorized by law, to enter the property and physically remove the installation at a rate of 1.3 times the actual costs incurred. The Town of Athol shall use the financial surety as stipulated in the Financial Surety Section 3.24.14.

3.24.14 Financial Surety: The applicant of ground-mounted solar photovoltaic installations shall provide surety in the form of cash, certified bank check, escrow account or bond held by and for the Town of Athol to cover the cost of removal and stabilization of the site in the event the town must remove the installation and remediate the landscape, in an amount and form determined to be reasonable by the Special Permit Granting Authority, but in no event to exceed more than 130 percent of the cost of removal and stabilization costs as well as any compliance with the additional requirements set forth herein.

This surety will be due and payable at the issuance of the building permit. Proof of payment in the form of a receipt from the Town Treasurer will be shown to the Building Inspector before the permits are issued. Such surety will not be required for municipally- or state-owned facilities. The project applicant shall submit a fully inclusive estimate of the costs associated with removal and stabilization prepared by a licensed professional engineer. Such estimate shall be reviewed by the Town of Athol and adjusted as needed to reflect the opinion of the Town as to fair costs. The amount shall include a mechanism for calculating increased removal costs due to inflation.

As a condition of approval, an applicant shall bind itself to grant the necessary license or easement to the Town to allow entry to remove the structures and stabilize the site. The Town shall have the right but not the obligation to remove the facility.

3.24.15 Taxes or Payment in Lieu of Taxes: If the project would otherwise be exempt from the payment of personal or real property taxes, the applicant shall enter into a tax agreement or a payment in lieu of taxes (PILOT) agreement with the Town of Athol that provides an equivalent amount of tax revenue to the town as determined by the Board of Assessors. Any tax-related agreement or PILOT shall be approved by the Board of Assessors prior to the issuance of the Building Permit.

3.24.16 Costs of Outside Expertise: The Special Permit Granting Authority may hire, at the expense of the applicant, consultants to review the plans submitted if it determines that independent expert review is appropriate for the interest of the neighborhood and/or the town. The applicant shall pay the estimated cost of said expert(s), including all legal fees and publication fees, to the Town prior to any review being undertaken. No Building Permit shall be approved until the total costs of said review(s) have been paid by the applicant.

3.24.17 Waiver of Design Standards

1. The Special Permit Granting Authority may waive or reduce strict compliance with any requirement of the Design Standards of this bylaw (unless noted otherwise in the bylaw), or any rules and regulations promulgated hereunder, where:

- a. such action is allowed by federal, state or local statutes and/or regulations;
 - b. it is fully within the public interest;
 - c. it is not inconsistent with the purpose and intent of this bylaw and the purposes and intent of the bylaw can still be met with the waiver or reduction due to special circumstances of the site
 - d. and the full objectives of the bylaws can be met in an alternative manner.
- 2. The applicant shall submit a written request for any requested waiver at the time of the initial application. Such request shall be accompanied by an explanation or documentation supporting the waiver request and demonstrating that:
 - a. strict application of the bylaws does not further the purposes or objectives of this bylaw,
 - b. due to special circumstances of the site that the objectives of the bylaws can be met in an alternative manner and,
 - c. such a waiver or reduction of the requirements will not derogate from the intent or purpose of the bylaw.
- 3. All waiver requests shall be discussed during a required a public hearing duly noted in a public agenda and shall require a two-thirds vote in favor to be approved. If the Special Permit Granting Authority deems additional time or information is required in the review of the waiver request, the Special Permit Granting Authority may continue the request for the waiver to a subsequent BPCD meeting.

3.24.18 Rules and Regulations

The Special Permit Granting Authority may adopt, and from time to time amend, Rules and Regulations consistent with the provisions of this bylaw and G.L. c. 40A and other provisions of the General Laws, including the Subdivision Rules and Regulations of Town of Athol, Massachusetts, and shall file a copy of said Rules and Regulations with the Town Clerk. Said Rules and Regulations may provide for an application fee schedule for ground-mounted solar photovoltaic installation application submittals and methods for calculating the financial surety required under Section 3.24.14.

3.24.19 Ownership Changes

If the owner of the ground-mounted solar photovoltaic installation changes or the owner of the property changes, the special permit shall remain in effect, provided that the successor owner or operator assumes in writing all of the obligations of the special permit, site plan approval, and decommissioning plan. A new owner or operator of the ground-mounted solar photovoltaic installation shall notify the Special Permit Granting Authority and the Building Inspector/Zoning Enforcement Officer of such change in ownership or operator within thirty (30) days of the ownership change.

The special permit and all other local approvals for the ground-mounted solar array installation system would be void if a new owner or operator fails to provide written notification to Special Permit Granting Authority and the Building Inspector/Zoning Enforcement Officer in the required timeframe. Reinstatement of a void special permit, site plan approval and any other local approvals will be subject to the same review and approval processes for new applications under the Town of Athol Bylaws and Regulations.

3.24.20 Severability

If any provision of this bylaw is held invalid by a court of competent jurisdiction, the remainder of the bylaw shall not be affected thereby.

or act in relation thereto.

Article 7: CITIZEN PETITION: To see if the Town will vote to:

1 Large-Scale Ground-Mounted Photovoltaic Installations

1.1 Purpose

The purpose of this bylaw is to promote the development of solar energy facilities and appropriately regulate the creation of large-scale ground-mounted photovoltaic installations. These regulations shall include, but are not limited to, the placement, design, construction, operation, monitoring, modification and removal that address public safety, minimize impacts on scenic, natural and historic resources and to provide adequate financial assurance for the eventual decommissioning of such installations, consistent with the intent of Chapter 40A Section 3 of Massachusetts General Laws.

1.2 Applicability

The provisions set forth in this section shall apply to the construction, operation, and/or repair of large-scale ground-mounted solar photovoltaic installations.

This section shall apply to all large-scale ground-mounted solar photovoltaic installations proposed to be constructed after the effective date of this section as well as to physical modifications to existing installations that materially alter the type, configuration, or size of such systems or other equipment.

1.3 General Knowledge

1.3.1 Compliance with Laws, Ordinances and Regulations

The construction and operation of all large scale solar photovoltaic installations shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, electrical, and communications requirements. All buildings and fixtures forming part of a solar photovoltaic installation shall be constructed in accordance with the State Building Code.

1.3.2 Building Permit and Building Inspections

The Board of Planning and Community Development shall be the Special Permit Granting Authority for all special permits required for all under the Zoning Bylaw.

The Board of Planning and Community Development shall be the site plan review authority for all site plan approvals required for a Solar Energy System under the Zoning Bylaw.

1.3.3 Fees

The application for a building permit for large scale solar photovoltaic installation must be accompanied by the fee required for the building permit.

1.3.4 Waivers

The Board of Planning and Community Development may waive strict compliance with any requirement of the

Design Standards, Safety and Environmental Standards section of this bylaw, or any rules and regulations promulgated hereunder, where:

- (a) Such action is allowed by federal, state and local statutes and/or regulations
- (b) It is in the public interest

(c) It is not inconsistent with the purpose and intent of this by-law

1.3.5 Site Control

The project proponent shall submit documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed solar photovoltaic installation. Any special permit submitted under this section shall include a condition stating the above requirement and further stating that, in accepting the special permit the Applicant and Owner grant the Town permission to enter the property for the purpose of assessing and removing an abandoned or discontinued facility. This letter shall be signed and notarized by the applicant and owner

1.3.6 Site Plan Review

Ground-mounted large scale solar photovoltaic installations shall undergo Site Plan Review with the Board of Planning and Community Development prior to construction.

1.3.6.1 General

All plans and maps shall be prepared, stamped and signed by a Professional Engineer licensed in Massachusetts.

1.3.6.2 Required Documents

- a) Plans showing existing conditions and proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, screening vegetation and structures.
- b) Blueprints or drawings of the solar energy system signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts showing the proposed layout of the system and any potential shading from nearby structures
- c) One- or three-line electrical diagram detailing the solar energy system, associated components, and electrical interconnection methods, with all National Electrical Code-compliant disconnects and overcurrent devices;
- d) A list of any hazardous materials proposed to be located on the site in excess of household quantities and a plan to prevent their release to the environment;
- e) Documentation of the major system components to be used, including the electric generating components, transmission systems, mounting system, inverter, etc.
- f) Name, address, and contact information for the proposed system installer;
- g) Name, address, phone number and signature of the property owners, the applicant, the developer, and any other party that produced material to support the Special Permit Application or the Site Plan;
- h) The name, contact information and signature of any agents representing the owner or applicant;
- i) Provision of water including that needed for fire protection;
- j) Zoning district designation and zoning overlay(s) for the parcel(s) of land comprising the project site (submission of a paper copy of a zoning map with the parcel(s) identified is suitable for this purpose);
- k) Proof of liability insurance

1.4 Operations and Maintenance Plan

The Site Plan application shall include a plan for the operation and maintenance of the Large-Scale, Ground-Mounted, Solar Energy System, which shall include measures for maintaining safe access to the installation, stormwater and vegetation controls, as well as general procedures for operational maintenance of the installation.

1.5 Utility Notification

No Ground-Mounted, Solar Energy Systems shall be constructed until evidence has been given to the Board of Planning and Community Development that the utility company that operates the

electrical grid where the installation is to be located has been informed of the solar energy system owner or operator's intent to install an interconnected facility.

1.6 Dimension and Density Requirements

1.6.1 Setbacks

All facilities shall have front, side and rear yard setbacks of at least 75 feet. For any fencing that is required by the Board of Planning and Community Development; fencing shall be required to fully enclose the project. However, that where the lot is located in or abuts a residential district or abuts a conservation, recreation, or residential use, the front, side and rear yard shall not be less than 100 feet. Setbacks from a roadway shall be at least 200 feet. A fifty-foot minimum setback shall be used when the abutting parcel has the same owner. No trees shall be removed outside the limit of work boundary. The Board of Planning and Community Development may allow a lesser setback along a property line where, in its judgment, the proposed facility is not likely to negatively affect an existing or permitted land use on the abutting property or there is no need for the setback to achieve the purpose of limiting visual impact or sightlines of the property.

1.6.2 Appurtenant Structures

All appurtenant structures to a Large Scale Solar Energy System shall be subject to reasonable regulations concerning the bulk and height of structures, building coverage requirements, lot area, setbacks, sound or noise level generated by equipment, open space and parking. All such appurtenant structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other. Whenever reasonable, structures shall be screened from view by vegetation and/or joined or clustered to avoid adverse visual impacts.

1.6.3 Siting Requirements

One of the following conditions must be met:

The location of the facility, due to topography, tree lines, and/or vegetation, cannot reasonably be seen from a residence or public way during all seasons of the year.

Or

The location of the facility is so distant from a residence or public way, and/or so obscured by topography, tree lines, and/or vegetation, that the visual impact of the facility is rendered negligible, as determined by the Board of Planning and Community Development, during all seasons of the year.

1.6.4 Size

Height shall not exceed thirty-five (35) feet in height above finished grade. An increase in height may be granted in commercial districts by special permit.

1.7 Design Standards

1.7.1 Lighting

Lighting of solar photovoltaic installations shall be consistent with local, state and federal law. Lighting of other parts of the installation, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Lighting of the solar photovoltaic installation shall be directed downward and inward and shall incorporate full cut off fixtures to reduce light pollution.

1.7.2 Signage

Signs on Ground-Mounted, Solar Energy Systems shall comply with all applicable requirements of the Zoning Bylaws. A sign shall be required to identify only the owner and provide a 24- hour emergency contact phone number. Solar electric installations shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the solar electric installation.

1.7.3 Utility Connections

Reasonable efforts, as determined by the Board of Planning and Community Development, shall be made to place all utility connections from the solar electric installation underground, depending on appropriate soil conditions, shape, and topography of the site and any requirements of the utility provider. Electrical transformers for utility interconnections may be above ground if required by the utility provider.

1.7.4 Landscaping and Screening

Ground-Mounted Solar Photovoltaic Installations shall be screened from view by a staggered and grouped planting of shrubs and small trees. Such plantings shall use native plants and a mix of deciduous and evergreen species and may be located within the setback area. The species mix and depth of screening shall be determined by the Planning Board during site plan review based on site specific conditions with existing natural vegetation being used to the greatest extent possible.

1.8 Safety and Environmental Standards

1.8.1 Emergency Services

The large-scale solar photovoltaic installation owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the Fire Chief. Upon request, the owner or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the system shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation. This contact information and telephone number shall also be provided to the local emergency dispatch centre.

1.8.2 Land Clearing Soil Erosion and Habitat Impacts

Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the large-scale ground-mounted solar photovoltaic installation or otherwise prescribed by applicable laws, regulations and bylaws.

1.8.3 Noise

Noise generated by ground-mounted solar photovoltaic installations, cooling fans, inverters, associated equipment and machinery shall conform at a minimum to applicable state and local noise regulations, including the DEP's Division of Air Quality noise regulations, 310 CMR 7.10 and 3.8.1.1 of the Athol Zoning Bylaw. Noise reduction shall be considered and incorporated as needed during the design phase of the installation including the location of the noise generator, shielding, noise cancellation, filtering, and noise suppression.

1.9 Monitoring and Maintenance

1.9.1 Installation Conditions

The large-scale ground-mounted solar photovoltaic installation owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the local Fire Chief, AMLP and Emergency Medical Services. The owner or operator shall be responsible for the cost of maintaining the solar photovoltaic installation and any access road(s), unless accepted as a public way.

1.9.2 Modification Conditions

All Material Modifications to a solar energy system made after issuance of the required building permit shall require approval by the Board of Planning and Community Development.

1.10 Decommissioning and Abandonment

1.10.1 Removal

Any solar energy facility that has reached the end of its useful life or has been discontinued, decommissioned, or abandoned, shall be removed. The owner or operator shall physically remove the solar energy facility within one hundred fifty (150) days after the date of discontinued or abandoned operations or the date specified in a notice of discontinuance or decommissioning in compliance with the requirements of the Inspector of Buildings. The owner or operator shall notify the Board of Planning and Community Development by certified mail of any proposed date of discontinued operations or decommissioning and submit the plans for removal.

Removal shall consist of:

- a. Physical removal of all equipment from the site, including, but not limited to, the solar arrays, structures, appurtenant equipment, security barriers, and electrical transmission line above and below grade.
- b. Stabilization or re-vegetation of the site as necessary to return the site to its original state, and minimize erosion.
- c. Disposal of all solid and hazardous waste in accordance with local, state and federal waste disposal laws and regulations.

1.10.2 Abandonment

Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, the Large Scale Ground-mounted Solar Photovoltaic Installation shall be considered abandoned when it fails to operate for more than one hundred fifty days without the written consent of the Site Plan Review Authority. If the owner or operator of the Large Scale Ground-mounted Solar Photovoltaic Installation fails to remove the installation in accordance with the requirements of this section within one hundred fifty days of abandonment or the proposed date of decommissioning, the town may enter the property and physically remove the installation.

1.11 Financial Surety

Operators of installations shall provide security, either escrow account, bond, or otherwise, to cover the cost of removal of the system in the event the town must remove it and remediate the landscape. The form and amount of the security shall be determined by the Board of Planning and Community Development. The amount of the security shall reasonably reflect the anticipated cost of such removal and remediation. If the Board and the operator disagree, it shall be determined by a disinterested and qualified independent engineer. Such surety will not be required for municipally- or state-owned facilities. The amount shall include a mechanism for calculating increased removal costs due to inflation.

1.12 Severability

If any section of this bylaw is ruled invalid, such ruling will not affect the validity of the remainder of the bylaw.

These proposed Bylaws for the Town of Athol, are compiled as best practice from other Towns in Worcester County Massachusetts and their Zoning Bylaws.

The Bylaws of the following towns were reviewed:

Ashburnham
Auburn
Barre
Boylston
Hardwick

Hubbardston
Leicester
Lunenburg
New Braintree
North Brookfield
Oakham
Shrewsbury
Southborough
Spencer
Warren
Webster
Westminster
Winchendon

Or act in relation thereto.

The Finance and Warrant Committee will hold a meeting on the foregoing articles on Tuesday, September 29, 2020 at 5:30 p.m. in Memorial Hall and thereafter as necessary. You are hereby directed to serve the warrant by posting attested copied hereof in Hannaford Supermarket, Market Basket Supermarket, Quabbin Valley Healthcare, Post Office of said Town, and the Memorial Building of said Town, fourteen days, at least before the time for holding said meeting and by publishing a notice of said meeting in a newspaper having general circulation in the Town, fourteen days at least, before the time for holding said meeting.

Hereof, fail not, and make due return of the warrant with your doings thereon unto the Town Clerk at the time and place of meeting aforesaid.

Given under our hands this 22nd day of September in the year two thousand and twenty.

ATHOL BOARD OF SELECTMEN

Lee E. Chauvette

Stephen R. Raymond

Alan D. Dodge

William B. Chiasson

Rebecca J. Bialecki, Chairman

I have served the within warrant by posting up an attested copy, thereof in Hannaford Supermarket, Market Basket Supermarket, Quabbin Valley Healthcare in the Town of Athol, United State Post Office in the Town of Athol, and the Athol Memorial Building and a notice published in the Athol Daily News having general circulation in the Town on Monday, October 5, 2020. I mailed a copy to each member of the Finance and Warrant Advisory Committee, Moderator, Town Counsel and Board of Planning and Community Development and have returned this warrant to the Clerk of the Town of Athol within my doings hereon Monday, October 5, 2020.

, Constable

October ____, 2020